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DATE: Tuesday, March 08, 2005

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☐	L1	liu-c$.in. or mazumder-A$.in. or Brush-C$.in. or johnson-T$.in.	7580
☐	L2	hydrogel same probe	353
☐	L3	L2 and (hybridiz$ near target)	87
☐	L4	L2 and (hybridiz$ near (target or nucleic acid or protein or DNA or RNA))	116
☐	L5	L4 and (photocycloaddition)	3
☐	L6	L2 and photocycloaddition	10
☐	L7	L6 and (nucleic acid or protein or DNA or RNA)	10
☐	L8	L1 and L2	14
☐	L9	photocycloaddition	196
☐	L10	L9 and (hydrogel or polyacrylamide or polyurethane)	62
☐	L11	L10 and probe	37
☐	L12	L11 and @pd > 20050308	0
☐	L13	L11 and binding pair	4
☐	L14	L1l and fluorophore	0
☐	L15	Ll11 and (fluorophore or biotin or digoxygenin or bromouridine)	0
☐	L16	Ll1 and (fluorophore or biotin or digoxygenin or bromouridine)	49
☐	L17	L11 and (fluorophore or biotin or digoxygenin or bromouridine)	28

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NEWS	14	DEC 30	EPFULL: New patent full text database to be available on STN
NEWS	15	DEC 30	CAPLUS - PATENT COVERAGE EXPANDED
NEWS	16	JAN 03	No connect-hour charges in EPFULL during January and February 2005
NEWS	17	FEB 25	CA/CAPLUS - Russian Agency for Patents and Trademarks (ROSPATENT) added to list of core patent offices covered
NEWS	18	FEB 10	STN Patent Forums to be held in March 2005
NEWS	19	FEB 16	STN User Update to be held in conjunction with the 229th ACS National Meeting on March 13, 2005
NEWS	20	FEB 28	PATDPAFULL - New display fields provide for legal status data from INPADOC
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NEWS	22	FEB 28	MEDLINE/LMEDLINE reloaded
NEWS	23	MAR 02	GBFULL: New full-text patent database on STN
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NEWS HOURS	STN Operating Hours Plus Help Desk Availability
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COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'STNGUIDE' ENTERED AT 14:13:04 ON 08 MAR 2005
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=> FILE .BIOTECH CAPLUS
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.06	0.27

FILES 'MEDLINE, BIOTECHDS, EMBASE, BIOSIS, SCISEARCH, CANCERLIT, CAPLUS'
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7 FILES IN THE FILE LIST

=> S PHOTOCYCLOADDITION
L1 4897 PHOTOCYCLOADDITION

=> S L1 AND HYDROGEL
L2 10 L1 AND HYDROGEL

=> S L1 AND (PROBE# OR TARGET OR NUCLEIC ACID OR PROTEIN OR POLYPEPTIDE)
L3 103 L1 AND (PROBE# OR TARGET OR NUCLEIC ACID OR PROTEIN OR POLYPEPTI
DE)

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=> s l3 and hydrogel
L4 7 L3 AND HYDROGEL

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L4 ANSWER 1 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2003-10657 BIOTECHDS
TITLE: Detection of **target nucleic acid** or **protein** on chip based DNA microarrays, involves contacting first member of binding pair with second member of binding pair comprising fluorophore, and detecting the fluorophore;
DNA microarray for **target nucleic acid** or **protein** detection
AUTHOR: LIU C; MAZUMDER A; BRUSH C K; JOHNSON W T
PATENT ASSIGNEE: LIU C; MAZUMDER A; BRUSH C K; JOHNSON W T
PATENT INFO: US 2002146730 10 Oct 2002
APPLICATION INFO: US 2001-25185 19 Dec 2001
PRIORITY INFO: US 2001-25185 19 Dec 2001; US 1999-344620 25 Jun 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2003-237971 [23]
AN 2003-10657 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - Detecting a **target nucleic acid** or **protein**, comprising providing a **target** containing

a **nucleic acid** or **protein** and a first member of a binding pair; hybridizing the **target** to a **probe** attached to a **hydrogel** matrix through a 2+2 **photocycloaddition**, contacting the first member of the binding pair with a second member of the binding pair comprising a fluorophore, and detecting the fluorophore, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a kit for detecting a **target nucleic acid** or **protein** comprising a **hydrogel** matrix, a **probe** and two members of binding pair.

BIOTECHNOLOGY - Preferred Method: The **nucleic acid** is synthesized by producing cDNA from mRNA, cDNA or cRNA from a DNA. The **target** is synthesized by incorporating the first member of a binding pair into the **nucleic acid** by polymerization. At least one of the second members of the binding pair is contacted with an antibody comprising a first member. Preferred Component: The first member comprises biotin (preferred), digoxygenin, or bromouridine. The second member comprises avidin, streptavidin (preferred), biotin antibody, digoxygenin antibody, or bromouridine antibody. The **protein** is cell lysate. The **probe** comprises a reactive site capable of undergoing a 2+2 **photocycloaddition**. The **hydrogel** matrix comprises a reactive site capable of undergoing a 2+2 **photocycloaddition**. The streptavidin is attached preferably to three to four fluorophore. The fluorophore is cyanine dyes or ALEXA FLOUR (RTM) dyes. The cyanine dye is Cy-3, Cy-5, or Cy-5.5. The ALEXA FLOUR (RTM) dye is ALEXA-532 (RTM), ALEXA-647 (RTM) (preferred), or ALEXA-633. The antibody is biotinylated anti-streptavidin antibody.

USE - For the detection of **target nucleic acid** or **protein** on chip based DNA microarrays.

ADVANTAGE - The invention provides a high-sensitivity **target** detection methods for use with **hydrogel** microarrays that provide a good signal to noise ratio. (12 pages)

L4 ANSWER 2 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2002-14847 BIOTECHDS
TITLE: Performing expression/single nucleotide polymorphism microarray to determine presence of **target**, by contacting **target** with microarray formed by attaching **probe** to support by **photocycloaddition** and scanning microarray;
DNA microaray, DNA chip and SNP for human and yeast gene expression analysis
AUTHOR: ELGHANIAN R; BRUSH C K; XU Y
PATENT ASSIGNEE: MOTOROLA INC
PATENT INFO: WO 2002012566 14 Feb 2002
APPLICATION INFO: WO 2000-US24894 9 Aug 2000
PRIORITY INFO: US 2000-232305 12 Sep 2000
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2002-434869 [46]
AN 2002-14847 BIOTECHDS
AB DERWENT ABSTRACT:

NOVELTY - Performing (M) expression/single nucleotide polymorphism microarray to detect presence of **target** (I), comprises attaching **probe** which will recognize (I) to polymer-coated support by (2+2) **photocycloaddition** to form microarray (II), contacting aqueous solution of (I) with (II), to form complex between complementing targets and **probes**, and scanning (II) to determine presence of (I).

DETAILED DESCRIPTION - Performing (M) expression/single nucleotide polymorphism microarray to detect presence of **target** (I), comprises attaching **probe** which will recognize (I) to polymer-coated support by (2+2) **photocycloaddition** to form microarray (II), contacting aqueous solution of (I) with (II), to form complex between complementing targets and **probes**, and scanning (II) to determine presence of (I). In (M), the **target** solution comprises an aqueous buffer solution and the **target**, and optionally an active enzyme, and a labeled carrier.

BIOTECHNOLOGY - Preferred Method: (M) further comprises application of a **probe** standard to the polymer-coated support. The **probe** and **probe** standard are applied to the polymer-coated support in about equal amounts, on a weight basis. The aqueous **target** solution further comprises a **target** standard. The concentration of the **target** is determined through comparison of the fluorescence intensities of the **target** and **target** standard. The **target** standard is selected from yeast mRNA and bacterial mRNA, or their combination. Scanning occurs in a spectrometer capable of measuring and recording fluorescence intensity and position. The aqueous **target** solution comprises a buffer capable of maintaining pH from about 6-9, an active enzyme (such as thermosequanase) that is capable of transferring a label to a **probe/target** complex by single base extension, and a fluorescently labeled carrier (such as di-deoxynucleotide triphosphate) which provides a transferable label to an active enzyme for transfer to a **probe/target** complex by single base extension. The **target** is a labeled **nucleic acid**, and the label is selected from Cy-3, Cy-5, Cy-5.5, and ALEXA FLUOR (RTM), preferably Cy-3. (M) further comprises developing the microarray after application of the **target** solution, where the developing lasts from 1 minute-42 hours, preferably 16 hours. Developing occurs between 30 and 45degreesC, preferably 37degreesC. Developing lasts for 30-60, preferably 40-50 heating/cooling cycles. (M) further comprises washing with an aqueous wash after developing, where the aqueous wash contains a buffer which comprises phosphate and sodium chloride and is capable of maintaining pH from 6-9. The aqueous wash is performed between 40 and 70degreesC, preferably 50 and 60degreesC. The solid support is a material selected from nylon, polystyrene, glass, latex, polypropylene, and activated cellulose, or their, preferably a glass. The polymer coated support is a **hydrogel** microarray formed by crosslinking a **hydrogel** simultaneous with the attachment of **probe**. The **hydrogel** microarray is prepared by first crosslinking a **hydrogel** prior to attachment of the **probe**. A photosensitizer such as anthroquinone-2-sulfonic acid is added during attachment of the **probe**. The polymer is a polymer, reactive polymer, or copolymer made of at least two co-monomers where at least one of the co-monomers can undergo (2+2) **photocycloaddition**, or a copolymer chemically modified to contain a reactive group that undergoes (2+2) **photocycloaddition**. The polymer or reactive prepolymer contains polyacrylamide. The **probe** comprises a **nucleic acid** fragment containing less than about 1000 nucleotides, and further optionally comprises a linker which is an organic chain of about 6-100 atoms in length. The **nucleic acid** fragment is selected from synthetic nucleotides and modified nucleotides or their combinations. The **probe** is cDNA, and is chemically modified to contain a reactive group that undergoes (2+2) **photocycloaddition** . The **probe** is chemically modified with a phosphoramidite which is chemically functionalized with a reactive site capable of undergoing (2+2) **photocycloaddition**. The phosphoramidite is functionalized with a cinnamide. The **probe** inherently contains a reactive site that undergoes (2+2) **photocycloaddition**. The reactive site present on the polymer and/or the reactive site present on the **probe**(s) contains an alkene group. The reactive site present on the polymer and/or the reactive site present on the **probe** is selected from dimethyl maleimide, maleimide, thymine, polythymine, acrylate, cinnamate, and citraconimide or their combinations.

USE - (M) is useful for performing expression microarray or single nucleotide polymorphism microarray to determine the presence of a **target**, where the **target** is a labeled **nucleic acid** selected from mRNA, RNA, DNA, amplified RNA, amplified DNA, or its modifications, preferably mRNA, RNA, or DNA (claimed). (M) is useful for performing gene analyses including expression and single nucleotide polymorphism.

ADVANTAGE - (M) is a sensitive method for performing expression microarray or single nucleotide polymorphism microarray to determine the presence of a **target**.

EXAMPLE - The cRNA targets for gene expression monitoring on

expression microarray chip were either total RNA or poly(A) mRNA that were amplified and biotin-labeled. poly(A) RNA were converted into double-strand cDNA using T7-d (T)24 oligo primer and SUPERSCRIPT (RTM) choice system. In vitro transcription was performed on those T7 promoter added dsDNA by using T7 transcriptase. The biotin labeled cRNA was purified and quantitated. The expression chips were then hybridized using biotin labeled cRNA targets in the concentration of 0.08 microg/microl of buffer containing MOTOROLA HYBRIDIZATION (RTM) buffer. The array was then washed with an aqueous buffer containing TRIZMA (RTM), sodium chloride and TWEEN-20 (RTM). The chips were then scanned with a Axon Series A scanner. The gene expression assay was performed using biotin-labeled cRNA generated from human placenta, brain, and heart mRNA. Ten 30 mer human gene expression **probes** which gave different expression levels and ten yeast **probes** were built on the chip. The targets were prepared using human mRNA with different radios of yeast mRNA added for monitoring the sensitivity and dynamic range of the platform performances. The microarray detected gene expression at three copy per cell sensitivity.(34 pages)

L4 ANSWER 3 OF 7 BIOTECHDS COPYRIGHT 2005 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2001-06902 BIOTECHDS
TITLE: Composition for attachment of biomolecules to solid supports, polymer hydrogels, and **hydrogel** arrays, comprises using **photocycloaddition** between reactive sites on the support and biomolecules;
DNA immobilization to solid support
AUTHOR: Johnson T; McGowen J; Beuhler A; Brush C K; Lajos R E
PATENT ASSIGNEE: Motorola
LOCATION: Schaumburg, IL, USA.
PATENT INFO: WO 2001001143 4 Jan 2001
APPLICATION INFO: WO 2000-US17422 23 Jun 2000
PRIORITY INFO: US 1999-344620 25 Jun 1999
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2001-168320 [17]
AN 2001-06902 BIOTECHDS
AB A composition comprising solid supports, optionally polymer-coated, attached to biomolecules by 2 + 2 cycloaddition between reactive sites on the support or polymer and the biomolecules is new. The biomolecule comprises a **nucleic acid** fragment containing less than 1,000 nucleotides and optionally further contains a spacer region. The solid support is nylon, polystyrene, glass, latex, polypropylene or activated cellulose, e.g. a bead, membrane, microwell, centrifuge tube or slide. In an example, copolymer polyacrylamide coglycidyl methacrylate was modified with acrylic acid to form a photoreactive polyacrylamide reactive prepolymer. This was coated on a solid support and exposed to UV radiation to photocrosslink in an array pattern of 100 um diameter pads spaced at 300 um pitch. The unexposed polymer was washed away, leaving a grid of **hydrogel** pads. The pads contained unreacted acrylate functional groups as attachment sites for biomolecules. (46pp)

L4 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2003:511934 CAPLUS
DOCUMENT NUMBER: 139:65764
TITLE: Use and evaluation of a [2+2] **photocycloaddition** in immobilization of oligonucleotides on a three-dimensional **hydrogel** matrix
INVENTOR(S): Elghanian, Robert; Brush, Charles K.; Xu, Yanzheng
PATENT ASSIGNEE(S): Amersham Biosciences AB, USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp., Cont.-in-part of U.S. Ser. No. 344,620.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003124525	A1	20030703	US 2001-928250	20010809
US 6664061	B2	20031216		
US 6372813	B1	20020416	US 1999-344620	19990625
US 2002146730	A1	20021010	US 2001-25185	20011219
US 2003096265	A1	20030522	US 2002-185279	20020628
WO 2003014392	A2	20030220	WO 2002-IB4038	20020809
WO 2003014392	A3	20031106		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:		
US 1999-344620	A2	19990625
US 2000-224070P	P	20000809
US 2000-232305P	P	20000912
US 2001-928250	A2	20010809

AB The present invention provides solid supports (e.g., glass) and polymer hydrogels (particularly polymer **hydrogel** arrays present on a solid support) comprising one or more reactive sites for the attachment of biomols., as well as biomols. comprising one or more reactive sites for attachment to solid supports and polymer hydrogels. The invention further provides novel compns. and methods for the preparation of biomols., solid supports, and polymer hydrogels comprising reactive sites. The invention also provides for preparation of crosslinked solid supports, polymer hydrogels, and **hydrogel** arrays, wherein one or more biomols. is attached by means of the reactive sites in a **photocycloaddn**. reaction. Advantageously, according to the invention, crosslinking of the **hydrogel** and attachment of biomols. can be done in a single step. Genes having different expression levels were measured simultaneously using biotin-labeled cRNA generated from human placenta, brain, and heart mRNA. The microarray could detect gene expression at 3 copy per cell.

L4 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:	2002:778614 CAPLUS
DOCUMENT NUMBER:	137:275329
TITLE:	**Hydrogel**-based microarray signal amplification methods and devices therefor
INVENTOR(S):	Liu, Chang-Gong; Mazumder, Abhijit; Brush, Charles K.; Johnson, W. Travis
PATENT ASSIGNEE(S):	USA
SOURCE:	U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 928,250. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002146730	A1	20021010	US 2001-25185	20011219
US 6372813	B1	20020416	US 1999-344620	19990625
US 2003124525	A1	20030703	US 2001-928250	20010809
US 6664061	B2	20031216		

PRIORITY APPLN. INFO.:		
US 1999-344620	A2	19990625
US 2001-928250	A2	20010809
US 2000-224070P	P	20000809
US 2000-232305P	P	20000912

AB Methods and devices for detecting **nucleic acid** and **protein** targets on **hydrogel** microarrays are disclosed. Fluorophores are incorporated into the targets and detected. A linear

correlation between **target** concentration and signal amplitude is maintained through the elimination of active enzyme amplification.

L4 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2002:123274 CAPLUS
DOCUMENT NUMBER: 136:162315
TITLE: Oligonucleotide microarrays prepared by [2+2] **photocycloaddition** and their use for SNP detection and gene expression analysis
INVENTOR(S): Elghanian, Robert; Brush, Charles K.; Xu, Yanzheng
PATENT ASSIGNEE(S): Motorola, Inc., USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012566	A2	20020214	WO 2001-US24894	20010809
WO 2002012566	A3	20030109		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
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AU 2001079244	A5	20020218	AU 2001-79244	20010809
EP 1307414	A2	20030507	EP 2001-957507	20010809
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.:		
US 2000-224070P	P	20000809
US 2000-232305P	P	20000912
WO 2001-US24894	W	20010809

AB Oligonucleotide microarrays prepared by [2+2] **photocycloaddn.** between suitably modified oligonucleotides and polymer- or **hydrogel**-coated substrate are disclosed. Thus, [2+2]photo-attachable functional groups were incorporated in polyacrylamide-based hydrogels and synthetic oligonucleotide **probes**. The **probes** were photochem. attached by covalent bonding to the three dimensional surface of the **hydrogel**. The resultant **hydrogel** microarrays were used for detection of specific **target** oligonucleotides, including mRNA and DNA, and are suitable for gene expression and single nucleotide polymorphism analyses.

L4 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2001:12732 CAPLUS
DOCUMENT NUMBER: 134:68455
TITLE: Methods and compositions for attachment of biomolecules to solid supports, hydrogels, and **hydrogel** arrays
INVENTOR(S): Johnson, Travis; McGowen, John; Beuhler, Allyson; Brush, Charles Kimball; Lajos, Robert Emil
PATENT ASSIGNEE(S): Motorola Inc., USA
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2001001143	A2	20010104	WO 2000-US17422		20000623
WO 2001001143	A3	20010308			
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
US 6372813	B1	20020416	US 1999-344620		19990625
CA 2378072	AA	20010104	CA 2000-2378072		20000623
EP 1190254	A2	20020327	EP 2000-941693		20000623
EP 1190254	B1	20040915			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO					
JP 2003524150	T2	20030812	JP 2001-507097		20000623
AU 768326	B2	20031211	AU 2000-56362		20000623
AT 276516	E	20041015	AT 2000-941693		20000623
US 2003078314	A1	20030424	US 2001-976986		20011011
US 6686161	B2	20040203			
PRIORITY APPLN. INFO.:			US 1999-344620	A	19990625
			WO 2000-US17422	W	20000623

AB The present invention provides solid supports (e.g., glass) and polymer hydrogels (particularly polymer **hydrogel** arrays present on a solid support) comprising one or more reactive sites for the attachment of biomols., as well as biomols. comprising one or more reactive sites for attachment to solid supports and polymer hydrogels. The invention further provides novel compns. and methods for the preparation of biomols., solid supports and polymer hydrogels comprising reactive sites. The invention also provides for preparation of crosslinked solid supports, polymer hydrogels, and **hydrogel** arrays, wherein one or more biomols. is attached by means of the reactive sites in a **photocycloaddn**. reaction. Advantageously, according to the invention, crosslinking of the **hydrogel** and attachment of biomols. can be done in a single step. Photopolymer polyacrylamide co-N-(6-acryloylhexyl)-2,3-dimethylmaleimide was prepared This polymer is coated on a solid support and exposed to UV radiation to photocrosslink and form a **hydrogel**. Unreacted maleimide functional groups in the **hydrogel** are then reacted with maleimide-functionalized DNA oligonucleotide.